

**ABSTRACT**

Peptides that are useful as transfection agents are described. The peptides can facilitate the efficient cellular internalization of a broad range and size of compounds that when non-covalently complexed therewith are efficiently internalized into a cell. Advantages include but are not limited to excellent transfection efficiency, relatively low toxicity, internalization by a broad host cell spectrum, and the simplicity and cost-effectiveness that arise from not having to covalently complex the peptide with a specific molecule to be delivered. Applications include but are not limited to the delivery of diagnostics and therapeutics, as well as drug discovery, gene discovery, and the analysis and/or manipulation of other cellular and molecular biological functions. Claims are made for transfection agents, compositions of matter, including pharmaceutical compositions, reagent kits, methods of delivery, and methods of identification of additional peptides for performing and/or including in the same.